

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Robert L. Bradley

Art Unit: 1761

Serial No. 10/074,870

Examiner: Leslie A. Wong

Filed: February 13, 2002

Confirmation No.: 6804

For: *Method for Making Cheese Having Reintroduced Fine Particles of Cheese*

Attorney Docket: 282.016

Customer No.: 23598

RULE 132 DECLARATION OF ROBERT L. BRADLEY

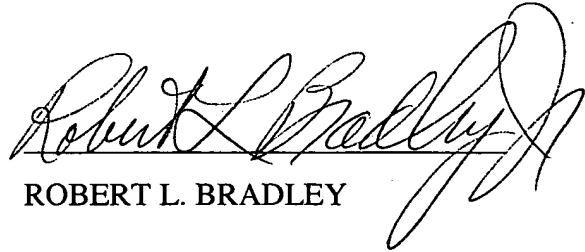
I, ROBERT L. BRADLEY, the undersigned Declarant, do hereby state and declare that:

1. I am intimately familiar with the invention described and claimed in the above-identified patent application (the '870 application). I am the inventor of the invention described and claimed therein.
2. From 1964 to the present, I have been a Professor of Food Science at the University of Wisconsin-Madison. I received my B.S. in Dairy Technology from the University of Massachusetts, Amherst in 1958. I received my M.S. in Food Science from Michigan State University in 1960. I received my Ph.D. in Food Science from Michigan State University in 1964. My *Curriculum vitae* is attached hereto as Exhibit A and incorporated herein by reference. I am one skilled in the art of the instant patent application.
3. I am familiar with the contents of the '870 application. I have read the Examiner's Office Action of January 2, 2004 and the Lehmann et al. and Kosikowski references cited by the Examiner in the Office Action.
4. In the Lehmann et al. patent, fine particles are heated. It is my technical opinion, based on my knowledge of the cheese making industry, that heating will shrink the fine particles, which will *decrease* the total surface area of the fine particles.

5. In contrast, practicing my invention as recited in amended claim 2 and independent claim 48 in the above-referenced patent application will cause the total surface area of the fine particles to increase.
6. In the Lehmann et al. patent, there is an optional step of clarifying the cheese fines before they are mixed with a medium, such as milk or another dairy product. From this, it appears that in the Lehmann et al. process there is a problem with the cheese fines settling out.
7. In contrast, claims 5 and 6 of the above-referenced patent application require "wherein the mixing step comprises inhibiting the fine particles of cheese curd from settling out of the subsequent lot of milk." In the practice of my invention, no clarifying step that is separate from the mixing step is required.
8. The Lehmann et al. patent describes a method of making rennet-based cheese, which does not require washing cheese curd with water.
9. In contrast, claim 14 of the above-referenced patent application requires "further comprising washing the curds with a wash water, wherein the wash water contains fine particles of cheese curd; and collecting the fine particles of cheese curd from the wash water." Nowhere does the Lehmann et al. patent discuss any washing step of cheese curd.
10. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like

so made are punishable by fine or imprisonment, or both, under Section 1002 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this Rule 132 Declaration is directed.

Dated: 20 April 2004


ROBERT L. BRADLEY

ROBERT LESTER BRADLEY, JR.

BORN

January 14, 1933, Beverly, Massachusetts

PRESENT ADDRESS

4704 Sumac Road, Middleton, WI 53562

EDUCATION

BS -Dairy Technology, University of Massachusetts, Amherst, 1958
MS -Food Science, Michigan State University, East Lansing, 1960
PhD -Food Science, Michigan State University, East Lansing, 1964

PROFESSIONAL EXPERIENCE

Assistant Professor, University of Wisconsin, 1964-1969
Associate Professor, University of Wisconsin, 1969-1974
Professor, University of Wisconsin, 1974-2001
Professor Emeritus, University of Wisconsin, 2001-present

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Dairy Science Association
Association of Official Analytical Chemists, International
International Association for Food Protection
Wisconsin Dairy Technology Society

MILITARY SERVICE

U.S. Army active duty from 1953-1955
Enlisted reserve 1955-1962
Honorable discharge 1962

HONORS

Wisconsin Dairy Products Association President's Award, 2001
Fellow of AOAC, 1996
Alfa Laval Agri Award in Dairy Extension, ADSA, 1994
General Referee of the Year, AOAC, 1994
Advisor Award of Merit, CALS-UW, 1989
Distinguished Alumni Award in Food Science, Michigan State University, 1987
Milk Industry Foundation Teaching Award in Dairy Manufacturing, ADSA, 1981

EXHIBIT

A

UW INSTRUCTIONAL RESPONSIBILITIES

A. Courses taught in the Food Science Department:

- FS 310 - Analysis of Food Products, 4 credits, lecture and lab. Application of quantitative techniques to the determination of composition and quality of food products.
- FS 415- Dairy Foods I; Market Milk, Butter and Special Products, 3 credits, lecture and lab. Procurement, processing and distribution of market milk and related products; manufacture of butter and related products; equipment operations, management of processing plants, plant sanitation, laboratory procedures.
- FS 421- Dairy Foods II; Ice Cream, Concentrated and Dried Milks, 3 credits, lecture and lab. Manufacture of ice cream, ice milk, sherbets, ices, concentrated milks, dried milks and related products. Equipment operation, quality factors, defects, plant sanitation and management, laboratory practices.
- FS 699- Dairy Products Judging Team coach.

B. Other teaching responsibilities:

Lectures given in: Farm Short Course on Dairy Products Manufacture.

UW EXTENSION RESPONSIBILITIES

- A. Directing the set-up of dairy laboratories for certification on a Grade A program
- B. Advising many dairies on methods to improve product quality and shelf-life and the design of new products.
- C. Analytical service to food companies needing this assistance
- D. Advising many dairy and food companies on HACCP set-up
- E. Instructional activities:
- Short courses - Cheesemaking, Dairy Plant Fieldmen, Pasteurization and Process Control, Ice Cream Making, Cheese Grading, Analysis, Dairy Chemistry, Basic Bacteriology, Improved Ice Cream Retailing.
- F. Secretary of Wisconsin Dairy Technology Society

CURRENT DEPARTMENTAL COMMITTEE RESPONSIBILITIES

Dairy Plant Advisory Executive Committee, ex officio and advisor

PUBLIC SERVICE

- A. Chairperson of Dairy Advisory Committee - WI Department of Agriculture, Trade and Consumer Protection
- B. General Referee for Dairy Chemistry for AOAC.
- C. Chairperson of Joint Action Team on Quality Assurance and Proficiency Testing Committee, (Formerly E302), International Dairy Federation.
- D. Member of Editorial Board of Journal of AOAC, International.
- E. Member of Editorial Board of Dairy food and Environmental Sanitation.
- F. 3-A Standards Committee, ADSA. representative, member Steering Committee.

CURRENT RESEARCH PROJECTS

- 1. Physical structure of low fat ice cream
- 2. Characterization and functionality of whey protein stabilizer complexes.
- 3. Extension of shelf-life of fluid milk by microbiological control
- 4. Cleanability of various stainless steel surfaces

PUBLICATIONS

1962

Bradley, R.L., Jr., L.G. Harmon and C.M. Stine. Effect of potassium sorbate on some organisms associated with cottage cheese spoilage. *J. Milk Food Technol.* 25:318-323.

Bradley, R.L., Jr. and C.M. Stine. A simple device for obtaining samples of headspace gas directly from sealed containers for analysis by gas chromatography. *J. Dairy Sci.* 45:1259.

1963

Bradley, R.L., Jr. and C.M. Stine. Spray-drying of natural cheese. *Manufactured Milk Prod. J.* 54(11):8-9, 40-42.

1964

Bradley, R.L., Jr. and C.M. Stine. Foam spray-drying of natural cheese. *Manufactured Milk Prod. J.* 55(6):8-11.

1965

Bradley, R.L., Jr. Spray-drying of natural cheese. *Diss. Abstr.* 26:1585.

1968

Li, C.F., R.L. Bradley, Jr. and T. Richardson. Improved extraction of chlorinated hydrocarbon pesticides from animal tissues. *Bull. Environ. Contamin. Toxicol.* 3:317-321.

Bradley, R.L., Jr. and C.F. Li. The effect of dieldrin on acid development during manufacture of Cheddar cheese. *J. Milk Food Tech.* 31:202-203.

Bradley, R.L., Jr. and C.M. Stine. A gas chromatographic study of the volatile flavors in natural and spray-dried Cheddar cheese. *J. Gas Chromatog.* 6:344-348.

1969

Bradley, R.L., Jr. Milk. In D.N. Lapedes (ed.) *McGraw-Hill Encyclopedia of Science and Technology*. McGraw-Hill Book Co., 330 West 42nd Street, New York, NY. pp. 499-510.

Mahdi, S.R. and R.L. Bradley, Jr. Fat destabilization in frozen desserts containing low dextrose equivalent corn syrups. *J. Dairy Sci.* 52:1738-1741.

Li, C.F. and R.L. Bradley, Jr. Degradation of chlorinated hydrocarbon pesticides in milk and butteroil by ultraviolet energy. *J. Dairy Sci.* 52:27.

1970

Minor, T.E., E.H. Marth, N.F. Olson, T. Richardson, W.E. Hantke, R.L. Bradley, Jr. and H.E. Calbert. Microbiology and chemistry of 105-year-old cheese. *J. Dairy Sci.* 53:1795-1801.

Li, C.F., R.L. Bradley, Jr. and L.H. Schultz. Fate of organochlorine pesticides during processing of milk into dairy products. *J. Assoc. Offic Anal. Chem.* 53:127-139.

Mahdi, S.R. and R.L. Bradley, Jr. Ice cream and ice milk--churning of milkfat made with low dextrose equivalent corn sweeteners. *Dairy Ice Cream Field* 153(1):140, 142, 144, 146.

1971

Abdul-Rahman, Y.A.K., E.J. Crosby and R.L. Bradley, Jr. Drying of single drops of foamed and nonfoamed sodium caseinate solutions. *J. Dairy Sci.* 54:1111-1118.

Rehfeld, B.M., R.L. Bradley, Jr. and M.L. Sunde. Toxicity studies on polychlorinated biphenyl in the chick. 1. Toxicity and symptoms. *Poultry Sci.* 50:1090-1096.

Hekmati, M. and R.L. Bradley, Jr. Degradation of organochlorine pesticides with hydrogen peroxide. *Milchwissenschaft* 26:224-226.

Huginin, A.G. and R.L. Bradley, Jr. Distribution of organochlorine pesticides among some milk components. *J. Dairy Sci.* 54:355-359.

1972

Hantke, W.E. and R.L. Bradley, Jr. Effect of dieldrin on bacteria producing lactic acid. *J. Milk Food Tech.* 35:655-658.

Bradley, R.L., Jr. Milk and Milk Products. In F.D. Snell and L.S. Ettore (ed.) *Encyclopedia of Industrial Chemical Analysis*. Vol. 16. John Wiley and Sons, Inc., New York, NY. pp. 123-149.

Bradley, R.L., Jr. Margarine. In F.D. Snell and L.S. Ettore (ed.) *Encyclopedia of Industrial Chemical Analysis*. Vol. 15. John Wiley and Sons, Inc., New York, NY. pp. 496-504.

Rehfeld, B.M., R.L. Bradley, Jr. and M.L. Sunde. Toxicity studies on polychlorinated biphenyls in the chick. 2. Biochemical effects and accumulations. *Poultry Sci.* 51:488-493.

Rehfeld, B.M., R.L. Bradley, Jr. and M.L. Sunde. The effect of polychlorinated biphenyls on chicks. 3. Recovery. *Poultry Sci.* 51:435-439.

1973

Bradley, R.L., Jr. Polychlorinated biphenyls in man's food--A review. J. Milk Food Technol. 36:155-162.

1975

Huginin, A.G. and R.L. Bradley, Jr. Exposure of man to mercury--A review. I. Environmental contamination and biochemical relationships. J. Milk Food Technol. 38:285-300.

Huginin, A.G. and R.L. Bradley, Jr. Exposure of many to mercury--A review. II. Contamination of food and analytical methods. J. Milk Food Technol. 38:354-368.

Roh, J.K., R.L. Bradley, Jr., T. Richardson and K.G. Weckel. Distribution and removal of mercury from milk. J. Dairy Sci. 58:1782-1788.

1976

Roh, J.K., R.L. Bradley, Jr., T. Richardson and K.G. Weckel. Distribution and removal of cadmium from milk. J. Dairy Sci. 59:376-381.

Roh, J.K., R.L. Bradley, Jr., T. Richardson and K.G. Weckel. Removal of copper from milk. J. Dairy Sci. 59:382-385.

Surak, J.G. and R.L. Bradley, Jr. Transport of organochlorine chemicals across cell membranes. Environ. Res. 11:343-352.

Surak, J.G., R.L. Bradley, Jr., A.L. Branen and E. Shrago. Effects of butylated hydroxyanisole on Tetrahymena pyriformis. Food Cosmetic Toxicol. 14:277-281.

Surak, J.G., R.L. Bradley, Jr., A.L. Branen and E. Shrago. Effects of butylated hydroxytoluene on Tetrahymena pyriformis. Food Cosmetic Toxicol. 14:541-544.

1977

DeBeukelar, N.J., M.A. Cousin, R.L. Bradley, Jr. Modification of milk proteins by psychrotrophic bacteria. J. Dairy Sci. 60:857-861.

1979

Hekmati, M. and R.L. Bradley, Jr. Effect of milk constituents on the persistence of sodium hypochlorite sanitizer. J. Dairy Sci. 62:47-48.

Hekmati, M. and R.L. Bradley, Jr. Utilization of acid whey in frozen yogurt. Cultured Dairy Products J. 14(2):6-7.

1980

Bradley, R.L., Jr. The effect of light on alteration of the nutritional value and flavor of milk. J. Food Prot. 43:314-320.

Mueller, J.S. and R.L. Bradley, Jr. Phthalic acid ester losses into various fluids from polyvinyl chloride tubing. J. Food Prot. 43:551-554.

Bradley, R.L., Jr. and A.G. Hugunin. Mercury in food, feedstuffs and the environment. In H.D. Graham, Safety of Foods 2nd ed. AVI Publishing Co., Westport, CT. pp. 350-422.

Bradley, R.L., Jr. The Dairy Industry. Colliers Encyclopedia, MacMillan Educational Corp., 866 Third Ave., New York, NY 10022.

Bradley, R.L., Jr. Margarine. Encyclopedia Americana. Grolier, Inc., Danbury, CT 06816.

1981

Bradley, R.L., Jr. and M. Hekmati. 1981. Preparation of frozen yogurt. U.S. Patent 4,293,573. October 6, 1981.

Bradley, R.L., Jr., G.R. Myrdal and P. Alioto. 1981. Measurement of milkfat in lowfat chocolate milk. J. Dairy Sci. 64:520-522.

Lindsay, R.C., S.M. Hargett, J.B. Wesson and R.L. Bradley, Jr. 1981. Evaluation of consumer preferences for yogurt products. Cult. Prod. J. 16(4):6-10.

1982

Bradley, R.L., Jr. Efficient cleaning of dairy equipment with warm water. J. Food Prot. 45:1010-1012.

Sommer, D.A., D.A. Stuiber, R.L. Bradley and R.E. Peterson. Raising marketable yellow perch on a polychlorinated biphenyl contaminated diet: A feasibility study for the perch aquaculture industry. Arch. Environ. Contam. Toxicol. 11:589-593.

Hekmati, M., R.L. Bradley, Jr. and M.L. Sunde. Screening test for toxicity of chlorinated milk derivatives by a fertile egg injection technique. J. Dairy Sci. 65:1318-1320.

1983

Hekmati, M., Bradley, R.L. Jr. and Sunde, M.L. Use of fertile egg injection technique to assess toxicity of chlorinated compounds. *J. Food Prot.* 46:690-692.

Smith, K.E. and R.L. Bradley, Jr. 1983. Effects on freezing point of carbohydrates commonly used in frozen desserts. *J. Dairy Sci.* 66:2464-2467.

1984

Smith, Karen and R.L. Bradley, Jr. Acceptance of yogurt made with and without lactose hydrolysis. *Cultured Dairy Prod. J.* 19(4):31-33, 35-37.

Bradley, R.L., Jr. Plotting freezing curves for frozen desserts. *Dairy Record* 85(7):86-87.

1985

Korycka-Dahl, M., T. Richardson and R.L. Bradley, Jr. Use of microbial β -lactamase to destroy penicillin added to milk. *J. Dairy Sci.* 68:1910-1916.

Case, R.A., R.L. Bradley, Jr., and R.R. Williams. Chemical and Physical Methods (Chapter 18) in G.H. Richardson, ed. *Standard Methods for the Examination of Dairy Products*. 15th ed. p. 327-404.

1986

Bradley, R.L., Jr. Characteristics and efficiency of milk filters. *Dairy Food Sanitation* 6:136-140.

Bradley, R.L., Jr. Accuracy of Gercock milkfat test Bottles: Collaborative Study: *J. Assoc. Offic. Anal. Chem.* 69:831-833.

Rexroat, Therese M. and R.L. Bradley, Jr. Acceptance of frozen desserts made with concentrated, decolorized, deionized hydrolyzed whey permeate. *J. Dairy Sci.* 69:1225-123.

Rexroat, Therese M. and R.L. Bradley, Jr. Stability of concentrated, decolorized, deionized hydrolyzed whey permeate. *J. Dairy Sci.* 69:1762-1766.

Smith, Karen, E. and R.L. Bradley, Jr. Ineffective cleaning of polysulfone ultrafiltration membrane systems and corrosion problems of bisulfite used as a sanitizer. *J. Dairy Sci.* 69:1232-1240.

1987

Smith, Karen E. and R.L. Bradley, Jr. 1987. Activity of four enzyme-based cleaners for ultrafiltration systems against proteins in skim milk and whey. *J. Dairy Sci.* 70:243-251.

Smith, Karen E. and R.L. Bradley, Jr. 1987. Evaluation of efficacy of four commercial enzyme-based cleaners of ultrafiltration systems. *J. Dairy Sci.* 70:1168-1177.

Smith, Karen E., and R.L. Bradley, Jr. 1987. Efficacy of sanitizers using unsoiled spiral-wound polysulfone ultrafiltration membranes. *J. Food Protect.* 50:567-572.

Kaustinen, Eva M. and R.L. Bradley, Jr. 1987. Acceptance of cream liqueurs made with whey protein concentrate. *J. Dairy Sci.* 70:2493-2498.

1988

Bradley, R.L., Jr. 1988. Robots in laboratory analyzes improve accuracy and productivity. *Lab. Robotics Auto.* 1(1):17-20.

Bradley, R.L., Jr. and T.M. Rexroat. 1988. Acceptance and stability of chocolate and strawberry fountain syrups made with concentrated, decolorized, deionized, hydrolyzed whey permeate. *J. Food Proc. Pres.* 12:163-170.

Karpinsky, J.L. and R.L. Bradley, Jr. 1988. Assessment of the cleanability of air-actuated butterfly valves. *J. Food Prot.* 51:364-368.

Smith, K.E. and R.L. Bradley, Jr. 1988. Evaluation of three different cleaners recommended for ultrafiltration systems by direct observations of commercial-scale spiral-wound ultrafiltration membranes. *J. Food Prot.* 51:89-104.

1989

Bradley, R.L., Jr. 1989. Removal of cholesterol from milk fat using supercritical carbon dioxide. *J. Dairy Sci.* 72:2834-2840.

Beyer, J.D., F.X. Milani, M.J. Dutelle and R.L. Bradley, Jr. 1989. Gas chromatographic determination of cholesterol in egg products. *J. Assoc. Off. Anal. Chem.* 72:746-748.

Bradley, R.L., Jr. 1989. Removal of cholesterol from milk fat using supercritical carbon dioxide. *J. Dairy Sci.* 72:2834-2840.

1990

Bohner, H.F., and R.L. Bradley, Jr. 1990. Effective control of microbial populations in polysulfone ultrafiltration membrane systems. *J. Dairy Sci.* 73:2309-2317.

Escobar, G.J., and R.L. Bradley, Jr. 1990. Effect of mechanical treatment on the free fatty acid content of raw milk. *J. Dairy Sci.* 73:2054-2060.

1991

Bohner, H.F. and Bradley, R.L., Jr. 1991. Corrosivity of chlorine dioxide used as a sanitizer in ultrafiltration systems. *J. Dairy Sci.* 74:3348-3352.

Bradley, R.L., Jr. 1991. Tests you should be running in your milk monitoring program. *Proceedings - CDR Cheese Research and Technology Conf.*, March 6-7.

Bradley, R.L., Jr. 1991. Removing cholesterol from milkfat using supercritical carbon dioxide. In C. Haberstroch and C.E. Morris, *Fat and Cholesterol Reduced Foods: Technologies and Strategies*. *Adv. Appl. Biotechnol. Series* 12:221-232.

Gruetzmacher, T.J. and Bradley, R.L., Jr. 1991. Acid whey as a replacement for sodium caseinate in spray-dried coffee whiteners. *J. Dairy Sci.* 74:2838-2849.

Donhowe, D.P., R.W. Hartel and R.L. Bradley, Jr. 1991. Determination of ice crystal size distributions in frozen desserts. *J. Dairy Sci.* 74:3334-3344.

Bradley, R.L., Jr. 1991. Tests you should be running in your milk monitoring program. *UW Dairy Pipeline* 3(2):1-4.

1992

Bohner, H.F. and R.L. Bradley, Jr. 1992. Effective Cleaning and Sanitizing of Polysulfone Ultrafiltration Membrane Systems. *J. Dairy Sci.* 75:718-724.

Bradley, R.L., Jr. 1992. Cleaning and sanitizing UF membranes used in whey processing. *Proceedings - Dairy Products Technical Conf.* April 29-30.

Bradley, R.L., Jr. 1992. Properties of chemical sanitizers. *UW Dairy Pipeline* 4(2):6-8.

1993

Bradley, R. L., Jr., E. Arnold, Jr., D.M. Barbano, R.G. Semerad, D.E. Smith and B.K. Vines. 1993. Chemical and Physical Methods (Chapter 15). In R.T. Marshall (ed.) *Standard Methods for the Examination of Dairy Products*, 16th ed., p. 433-531.

Bradley, R.L., Jr., 1993. Cholesterol removal from milkfat. In *Newsletter of IDF* (No. 139, Suppl.) Special Addresses. p. 23-34.

Wendorff, W.L., R.M. Kaiser, and R.L. Bradley. 1993. Freezing point impacts on quality premiums. UW Dairy Alert, Dec. 1, 1-8.

1994

Gruetzmacher, T.J. and R.L. Bradley, Jr. 1994. Improving Milk Quality with Existing Equipment. UW Dairy Pipeline 6(4): 1, 6-7.

Livney, Y.D. and R.L. Bradley, Jr. 1994. Factors Affecting Flavor of Whey as an Ingredient in Ice Cream and Other Frozen Desserts. Cultured Dairy Prod. J. 29(4): 23, 24, 26, 27.

Bradley, R.L. Jr. 1994. Moisture and Total Solids Analysis (Chapter 7, p. 93-111) in S.S. Nielsen, ed., Introduction to the Chemical Analysis of Foods. Jones and Bartlett Publishers, Boston, MA.

Bradley, R.L. Jr. 1994. Foam Spray Drying. Proceedings -- Dairy Products Technical Conf. April 26-27.

1995

Wee, C.S., R.L. Bradley, Jr. and S.C. Ingham. 1995. Using quat in dairy plant food baths - does it work? U.W. Dairy Pipeline 7(4):8-9.

Hong, C.M., W.L. Wendorff and R.L. Bradley, Jr. 1995. Effects of packaging and lighting on pink discoloration and lipid oxidation of annatto-colored cheeses. J. Dairy Sci 78:1896-1902.

Hong, C.M., W.L. Wendorff and R.L. Bradley, Jr. 1995. Effects of light induced pink discoloration of annatto colored cheese. J. Food Sci. 60:94-97.

1997

Painter, C.J. and R.L. Bradley, Jr. 1997. Residual alkaline phosphatase activity in milks subject to various time-temperature treatments. J. Food Protect. 60:525-530.

Bradley, R.L., Jr. 1997. Change in temperatures for accurate Babcock tests. U.W. Dairy Pipeline. 9(3):1,3.

Johnson, M.J., R.L. Bradley, Jr. and W.L. Wendorff. 1997. Efficient use of whey cream in cheesemaking. U.W. Dairy Alert. 1997:1-7.

1998

Bradley, R.L., Jr. 1998. Moisture and total solids analysis. (Chap. 8, pp. 119-139) in S.S. Nielsen, ed. Food Analysis, 2 ed., Aspen Publishers, Inc. Gaithersburg, MD.

1999

Gruetzmacher, T.J. and R.L. Bradley, Jr. 1999. Identification and control of processing variables that affect the quality and safety of fluid milk. *J. Food Protect.* 62:625-631

Bradley, R.L., Jr. 1999. Quality Assurance and Proficiency Testing. Report of Group E203. Bulletin 342. International Dairy Federation, Brussels, BE.

2000

Bradley, R.L., Jr. 2000. Milk and Milk Products in WG Pond and KR Pond. Introduction to Animal Science, J Wiley and Sons, Inc., NY Publications. 612-652.

Steiner, Amelia E., Marianne M. Maragos, and R.L. Bradley, Jr. 2000. Cleanability of Stainless Steel Surfaces with Various Finishes. *Dairy Food and Environment Sanitation.* 20:250-260.

Bradley, R.L. Jr. 2000. Dairy Products. In W. Horwitz. Official Methods of Analysis of the Assn. Of Offic. Anal. Chem. Int. Chap. 33. Gaithersburg, MD.

2001

Kornacki, J.L., R.L. Bradley, Jr., and R.S. Flowers. 2001. Microbiology of Butter and Related Products in E.H. Marth and J.L. Steele, eds. *Applied Dairy Microbiology.* 2nd ed. Marcel Decker, NY.

Emmons, D.B., R.L. Bradley, Jr., J.P. Sauvé, and C. Campbell, C. La Croix. 2001. Variations of Moisture Measurement in Cheese. *J. Assn. Offic. Anal. Chem., Int* 84:593-604.

Emmons, D.B., R.L. Bradley, Jr., J.P. Sauvé, and C. Campbell, C. La Croix. 2001. Movement of Moisture in Refrigerated Cheese Samples Transferred to Room Temperature. *J. Assn. Offic. Anal. Chem., Int.* 84:620-622.

Bradley, R.L., Jr. and Margaret A. Vanderwarn. 2001. Analysis of Cheese and Cheese Products for Moisture. *J. Assn. Offic. Anal. Chem., Int* 84:570-592.

Hooi R., DM Barbano, M. Baulthaus, R.L. Bradley, Jr., and R. Reddy. 2000. Chemical and Physical Methods. Chapter 15 in M. Weir ed. *Standard Methods for the Examination of Dairy Products.* American Public Health Assn., Washington, D.C.

ABSTRACTS OF PAPERS PRESENTED AT PROFESSIONAL MEETINGS

Bradley, R.L., Jr., L.G. Harmon and C.M. Stine. The effect of potassium sorbate on organisms commonly associated with cottage cheese spoilage. J. Dairy Sci. 44:1171. 1961.

Bradley, R.L., Jr. and C.M. Stine. Spray-drying Cheddar and Blue cheese. J. Dairy Sci. 45:649. 1962.

Bradley, R.L., Jr. and C.M. Stine. Foam spray-drying Cheddar cheese. J. Dairy Sci. 46:592. 1963.

Bradley, R.L., Jr. and C.M. Stine. A gas chromatographic study of the flavor volatiles in natural and spray-dried cheeses. J. Dairy Sci. 47:679. 1964.

Li, C.F. and R.L. Bradley, Jr. Degradation of chlorinated hydrocarbons in fluid milk systems by ultraviolet light. J. Dairy Sci. 50:944. 1967.

Madhi, S.R. and R.L. Bradley, Jr. Fat destabilization in ice cream and ice milk containing low d.e. corn sweeteners. J. Dairy Sci. 51:931. 1968.

Hugunin, A.G. and R.L. Bradley, Jr. Location of organochlorine pesticides in milk. J. Dairy Sci. 52:887. 1969.

Hantke, W.E. and R.L. Bradley, Jr. Effect of an organochlorine pesticide on bacteria producing lactic acid. J. Dairy Sci. 54:755. 1971.

Bradley, R.L., Jr. Undergraduate food science training at the University of Wisconsin. J. Dairy Sci. 54:811. 1971.

Bradley, R.L., Jr. Polychlorinated biphenyls in man's food and the environment. J. Milk and Food Tech. 35:686. 1972.

Surak, J.G. and R.L. Bradley, Jr. Transport of organochlorine chemicals across cell membranes. American Industrial Hygiene Assoc. 1973.

Roh, J.K. and R.L. Bradley, Jr. Distribution and removal of mercury from milk. J. Dairy Sci. 57:587. 1974.

Roh, J.K., R.L. Bradley, Jr. and D.B. Lund. Efficacy of chemical cleaners and sanitizers. J. Milk and Food Tech. 38:635. 1975.

DeBeukelar, N.J. and R.L. Bradley, Jr. Modification of milk proteins by psychrotrophic bacteria. J. Dairy Sci. 58:785. 1975.

Hugunin, A.G., R.L. Bradley, Jr. and W.E. Ribelin. Sensitivity of guinea pigs and fetuses to diets containing added methyl mercury and selenium. J. Milk Food Technol. 38:635. 1975.

Surak, J.G., A.L. Brannen, R.L. Bradley, Jr., A.J. Maurer and W.E. Ribelin. Butylated hydroxyanisole and butylated hydroxytoluene effects on serum and liver lipid levels in Gallus domesticus. Abstr. of paper given at Annual Meeting of Institute of Food Technologists, Anaheim, CA. 1976.

Hekmati, M., R.L. Bradley, Jr. and M.L. Sunde. Toxicity of chlorinated compounds found in drinking water assessed by a fertile egg injection technique. J. Food Prot. 41:828. 1978.

Hekmati, M. and R.L. Bradley, Jr. Effect of milk constituents on the stability of sodium hypochlorite sanitizer. J. Dairy Sci. 61(Suppl 1):108. 1978.

Hekmati, M., R.L. Bradley, Jr. and M.L. Sunde. Toxicity of chlorinated milk derivatives assessed by a fertile egg injection technique. J. Dairy Sci. 61(Suppl 1):108. 1978.

Mueller, J.S. and R.L. Bradley, Jr. Stability of polyvinylchloride tubing in dairy processing operations. J. Food Prot. 41:828-829. 1978.

Sommer, D.A., D.A. Stuber, R.L. Bradley, Jr. and R.E. Peterson. Disposition, accumulation and elimination of PCB's from yellow perch fed a contaminated ration. U.W. Sea Grant Symposium on Toxic Materials. July, 1979.

Bradley, R.L., Jr. Efficient cleaning of raw milk equipment with colder water. J. Food Prot. 43:820-821. 1980.

Bradley, R.L., Jr., R.C. Lindsay and K.E. Smith. Acceptance of lowfat chocolate milk made with fructose and hydrolyzed lactose. J. Dairy Sci. 64(Suppl 1):43. 1981.

Smith, K.E. and R.L. Bradley, Jr. Acceptance of ice cream and ice milk made with and without lactose hydrolysis. J. Dairy Sci. 65(Suppl 1):18. 1982.

Smith, K.E. and R.L. Bradley, Jr. Acceptance of yogurt made with and without lactose hydrolysis. J. Dairy Sci. 65(Suppl 1):18. 1982.

Smith, K.E. and R.L. Bradley, Jr. Effects of carbohydrates on freezing points. J. Dairy Sci. 66(Suppl 1):91. 1983.

Korycka-Dahl, M., T. Richardson and R.L. Bradley, Jr. Penicillinase destroys penicillin G added to milk. J. Dairy Sci. 67(Suppl 1):70. 1984.

Benevenga, N.J., D.G. Cieslak, V.D. Liebbrandt, M.D. Finke and R.L. Bradley. Comparison of the protein quality of sweet whey and acid whey-corn mixtures for the pig. J. An. Sci. 59(Suppl 1):96. 1984.

Smith, K.E. and R.L. Bradley, Jr. Effectiveness and corrosion problems of bisulfite as a sanitizer for polysulfone ultrafiltration membranes. J. Dairy Sci. 68(Suppl 1):57-58. 1985.

- Escobar, G.J. and R.L. Bradley, Jr. 1985. Induced lipolysis in raw milk. *J. Dairy Sci.* Induced lipolysis in raw milk. *J. Dairy Sci.* 68(Suppl 1):61.
- Rexroat, T.M. and R.L. Bradley, Jr. 1985. Stability of concentrated deionized hydrolyzed whey permeate. *J. Dairy Sci.* 68(Suppl 1):88.
- Rexroat, T.M. and R.L. Bradley, Jr. 1985. Acceptance of electrodialyzed hydrolyzed whey permeate in selected dairy foods. *J. Dairy Sci.* 68(Suppl 1):89.
- Smith, K.E. and Bradley, R.L. 1986. Evaluation of efficacy of four commercial enzyme-based cleaners of ultrafiltration systems. *J. Dairy Sci.* 69(Suppl. 1):50.
- Smith, K.E. and Bradley, R.L. 1986. Efficacy of sanitizers using unsoiled and spiral-wound polysulfone ultrafiltration membranes. *J. Dairy Sci.* 69(Suppl.1):50.
- Kaustinen, Eva M. and R.L. Bradley, Jr. 1986. Production and Stability of Cream Liqueurs Made with Whey Protein Concentrate. *J. Dairy Sci.* 69(Suppl. 1):75.
- Srnak, P.M. and R.L. Bradley. 1987. Fractionation of Sweet Whey Proteins using Ultrafiltration. *J. Dairy Science* 70(Suppl 1):101.
- Smith, Karen E. and R.L. Bradley. 1987. Evaluation of three different cleaners Recommended for Ultrafiltration Systems by Direct Observations of Commercial-scale, Spiral-wound Ultrafiltration Membranes. *J. Dairy Sci.* 70(Suppl. 1):102.
- Smith, Karen E. and R.L. Bradley. 1987. Use of Scanning Electron Microscopy to Verify lack of Cleaning in Spiral wound Ultrafiltration Membranes. *J. Dairy Sci.* 70(Suppl. 1):103.
- Bradley, R.L., Jr. 1988. Removal of cholesterol from milkfat using supercritical CO₂. *J. Dairy Sci.* 71(Suppl. 1):72.
- Vanderwarn, M.A. and R.L. Bradley, Jr. 1988. Variables involved in cheese moisture analysis. *J. Dairy Sci.* 71:(Suppl. 1):81.
- Bohner, H.F. and R.L. Bradley, Jr. 1989. Effective control of microbial populations in polysulfone ultrafiltration membrane systems. *J. Dairy Sci.* 72(Suppl. 1):142.
- Gruetzmacher, T.J. and R.L. Bradley, Jr. 1989. Acid whey as a replacement for sodium caseinate in spray-dried coffee whitener. *J. Dairy Sci.* 72(Suppl. 1):169.
- Bohner, H.F. and R.L. Bradley, Jr. 1990. Corrosivity of chlorine dioxide sanitizer in ultrafiltration systems. *J. Dairy Sci.* 73(Suppl. 1):76.
- Branger, A.I. and R.L. Bradley, Jr. 1992. Separation of butter fractions through gravitational methods. *J. Dairy Sci.* 75 (Suppl. 1):116.

- Milani, F.X. and R.L. Bradley, Jr. 1992. Modification of induced complex formation between xanthan gum and whey proteins at reduced pH. *J. Dairy Sci.* 75(Suppl. 1):121.
- Gruetzmacher, T.J. and R.L. Bradley, Jr. 1993. Identification of factors involved in post-pasteurization contamination of fluid milk. *J. Dairy Sci.* 76(Suppl. 1):105.
- Gruetzmacher, T.J. and R.L. Bradley, Jr. 1994. Control of processing variables that affect quality and safety of fluid milk. *J. Dairy Sci.* 72 (Suppl 1):7.
- Painter, C.J. and R.L. Bradley, Jr. 1994. Acceptance of ice cream sweetened with honey. *J. Dairy Sci.* 72 (Suppl 1):50.
- Hong, C., W.L. Wendorff and R.L. Bradley, Jr. 1994. Packaging and lighting effects on the pink discoloration of annatto-colored cheeses. *J. Dairy Sci.* 72 (Suppl 1):22.
- Painter, C.J. and R.L. Bradley, Jr. 1995. Residual alkaline phosphatase activity in milks subjected to various time/temperature treatments. *J Dairy Sci* 78 (Suppl 1):36.
- Lim, L.K. and R.L. Bradley, Jr. 1995. Effect of pre-aeration on the structure, sensory quality, and shelf-stability of reduced fat frozen dessert. *J. Dairy Sci* 78 (Suppl 1):23.
- Painter, C.J. and R.L. Bradley, Jr. 1995. Residual alkaline phosphatase activity in milks subjected to various time/temperature treatments. I.D.F. Symp. Heat Treatments and Alternative Methods, Vienna, Austria, Sept.
- Jacobsen, Jessica, R.L. Bradley, Jr. and R.W. Hartel. 1999. Ice crystallization in a scraped surface slush freezer. *J. Dairy Sci.* 82 (Suppl. 1):1.
- Fonseca, L.M. and R.L. Bradley, Jr. 1999. Fractionation of whey proteins by complex formation. *J. Dairy Sci.* 82(Suppl. 1):27.

EXTENSION PUBLICATIONS

Bradley, R.L., Jr. Cultured Products. 7 pp. 1969.

Bradley, R.L., Jr., C.M. Dunn, M.E. Mennes and D.A. Stuiber. Home smoking and pickling of fish. Bull. No. D2259. 14 pp. 1970.

Bradley, R.L., Jr., C.M. Dunn, M.E. Mennes and D.A. Stuiber. Food Fact Sheet--Great Lakes Salmon and Trout. 3 pp. 1971.

Bradley, R.L., Jr. and W.C. Winder. Frozen yogurt--Fact or fancy? Production Tip in Monthly Bulletin of National Ice Cream Retailers Association. 1977.

Wagner, M.K., R.L. Bradley, Jr. and M.E. Mennes. Homemade yogurt, sour cream and buttermilk. Bull. No. B2768. 1984.

Johnson, C.E., R.L. Bradley, Jr. and A.N. Bringe. Manual cleaning of milking equipment. Bull. No. A1300. 1984.

Wagner, M.K. and R.L. Bradley, Jr. Pasteurization of milk. Bull. No. B1257. 1984.

Bradley, R.L., Jr., and C.E. Johnson and A.N. Bringe. Circulation cleaning of milking systems. Bull. No. A3321. 1984.

Bradley, R.L., Jr. and M.E. Mennes. Home-make ice cream and ice milk. bull. No. B2766. 1985.

Bradley, R.L. and M.K. Wagner. Making Cottage Cheese at Home. Bull. B1630. 1986.

Bradley, R.L. and M.K. Wagner. Making Butter at Home. Bull. B2770, 1986.

U.S. PATENT

M. Hekmati and R.L. Bradley, Jr. Preparation of frozen yogurt. U.S. Patent No. 4,293,573. October 6, 1981.

TRADE JOURNALS

Bradley, R.L., Jr. How to minimize off-flavors in milk. Dairy Record 82(2):93, 94, 97, 1983.

Bradley, R.L., Jr. Updating the aseptic milk picture. Dairy Record 82(4):90, 91, 1983.

Bradley, R.L., Jr. and K. Smith. Finding the freezing point of frozen desserts. Dairy Record 82(6):114, 115, 1983.

Bradley, R.L., Jr. Testing for fat in chocolate milk. Dairy Record 82(8):124-125, 1983.

Bradley, R.L., Jr. Emulsification and deemulsification. NICRA Bull. 4(1):4, 1983.

Bradley, R.L., Jr. Quality is what you put in it. NICRA Bull. 4(7):6, 1983.

Bradley, R.L., Jr. Antibiotics in milk and products. The Cheese Reporter 106 (44):6, 1983.

Bradley, R.L., Jr. and K. Smith. A break-through in soft-serve ice milk. Dairy Record 82(11):180-182, 1983.

Bradley, R.L., Jr. and K. Smith. How to make hydrolyzed lactose cost effective in ice cream formulas. Dairy Record. 82(11):184-186, 188, 190, 1983.

Bradley, R.L., Jr. Eliminating light-activated flavor. Dairy Record 82(10):168, 170, 1983.

Bradley, R.L., Jr. Testing for pasteurization. Dairy Record 85(2):101, 1984.

Bradley, R.L., Jr. 1984. Plotting freezing curves for frozen desserts. Dairy Record 85(7):86-87, 1984.

Bradley, R.L., Jr. 1984. Protecting ice cream from heat shock. Dairy Record 85(10):120-122, 1984.

Bradley, R.L., Jr. and W.C. Winder. Frozen yogurt--Fact or fancy. American Dairy Rev. 38(6):30B-30C, 1984.

Hekmati, M. and R.L. Bradley, Jr. Savings with acid whey in sherbet manufacture. Dairy Ice Cream Field 162(2):66-68, 1979.

Lindsay, R.C., M.M Meyers and R.L. Bradley, Jr. Consumer acceptance ratings of vanilla ice cream: Influence of yellow colorings and flavor quality. Dairy Field 162(11):60-61, 121-124, 1979.

Bradley, R.L., Jr. Uses and misuses of stabilizers. N.I.C.R.A. Bull. 11(5):5-6, 1981.

Bradley, R.L., Jr., R.C. Lindsay and K.E. Smith. 1981. Savings in lowfat chocolate milk using fructose and hydrolyzed lactose. Dairy Field 164(10):144-150, 1981.

Bradley, R.L. Jr. Intricacies of the Babcock Test for Milkfat. Dairy Field 169(6):28, 29, 43. 1986.

Bradley, R.L. Jr. 1986. The Hysteria of Listeria. Dairy Field 169(11):37, 57.

Bradley, R.L., Jr. 1987. Automated Laboratory Increases Productivity. Dairy Field 170(7):39-40.

Bradley, R.L., Jr. 1987. Examining Chemicals Used for Cleaning Equipment. Dairy Field 170(9):20, 22-23.

Bradley, R.L., Jr. 1988. Controlling fat losses in dairy plants. Dairy Field 171(9):38-41.